

IV. AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A filter for filtering solid particles from a flowing liquid, especially for use in steam condensers and heat exchangers in thermal and nuclear power plants, said filter comprising a cylindrical housing (4) extending longitudinally along and about a central axis, a conically-shaped screen basket (2) located within said housing (4), a debris discharge pipe (1) extending longitudinally along and about the central axis within said housing (4) and operative for discharging accumulated and captured debris; a debris extractor arm (3) connected to and extending from the debris discharge pipe (1) and located at a predetermined distance above the screen so as to maintain an open gap between the bottom surface of the debris extractor arm and the screen basket (2), wherein said debris extractor arm (3) is rotatably driven over the entire length of the screen basket (2) ~~and has a curvature towards the screen extending outwards at a predetermined radius with a respective vertical plane to create a low pressure between the debris extractor arm (3) and the screen basket (2) for complete extraction of debris and conveying to said debris discharge pipe (1),~~

wherein the liquid flows in a first longitudinal direction within the housing (4) such that unfiltered liquid flows towards the screen basket (2) in the first longitudinal direction and, after being filtered, filtered liquid flows away from the screen basket (2) in the first longitudinal direction while debris-laden liquid flows in a second longitudinal direction being opposite the first longitudinal direction ~~and,~~

wherein the conically-shaped screen basket (2) tapers in the first longitudinal direction and

wherein the debris extractor arm (3) includes a pair of pentagon-shaped panel members, a first side connecting member, a second side connecting member, an intermediate side connecting member and an elongated trumpet-shaped inlet nozzle,

the pair of pentagon-shaped panel members being disposed apart from one another in a facially-opposing mirrored relationship, each pentagon-shaped panel member having a long edge, a first intermediate edge, a second intermediate edge, a first short edge and a second short edge with the long edge being longer than the first intermediate edge, the second intermediate edge, the first short edge and the second short edge and the first and second intermediate edges being longer than the first short

edge and the second short edge and with the long edge being contiguous to and between the first and second short edges, the first intermediate edge being contiguous to and between the first short edge and the second intermediate edge and the second intermediate edge being contiguous to and between the first intermediate edge and the second short edge.

the first side connecting member connected to and between respective ones of the first short edges, the second side connecting member connected to and between respective ones of the second short edges and the intermediate side connecting member connected to and between respective ones of the second intermediate edges thereby defining a debris extraction channel with opposing ones of the long edges and the first and second side connecting members defining a debris inlet into the debris extraction channel and with opposing ones of the first intermediate edges, the first side connecting member and the intermediate side connecting member defining a debris outlet from the debris extraction channel for fluid communication with the debris discharge pipe.

the elongated trumpet-shaped inlet nozzle connected to the respective ones of the long edges, the first side connecting member and the second connecting member, the elongated trumpet-shaped inlet nozzle having a curvature towards the screen and extending outwards at a predetermined radius with a respective vertical plane to create a low pressure between the debris extractor arm (3) and the screen basket (2) for complete extraction of debris and conveying to said debris discharge pipe (1).

2. (Previously Presented) The filter as claimed in claim 1, wherein the debris extractor arm (3) is provided with a drive for driving over the entire length of the screen.

3. (Original) The filter as claimed in claim 2, wherein the drive is a geared motor drive (5, 6).

4. (Canceled)

5. (Canceled)

6. (Original) The filter as claimed in claim 1, wherein said screen basket (4) has a conical shape.

7. (Currently Amended) A cooling system comprising an inlet (9) and an outlet (8) for cooling water, a debris filter, a debris outlet valve (10), a debris output pipe (11) and a condenser (12) for heat transfer,

wherein the debris filter includes a cylindrical housing (4) extending longitudinally along and about a central axis, a conically-shaped screen basket (2) located within said housing (4), a debris discharge pipe (1) extending longitudinally along and about the central axis within said housing (4) and operative for discharging accumulated and captured debris; a debris extractor arm (3) connected to and extending from the debris discharge pipe (1) and located at a predetermined distance above the screen so as to maintain an open gap between the bottom surface of the debris extractor arm and the screen basket (2),

wherein said debris extractor arm (3) is rotatably driven over the entire length of the screen basket (2) ~~and has a curvature towards the screen extending outwards at a predetermined radius with a respective vertical plane to create a low pressure between the debris extractor arm (3) and the screen basket (2) for complete extraction of debris and conveying to said debris discharge pipe (1),~~

wherein the liquid flows in a first longitudinal direction within the housing (4) such that unfiltered liquid flows towards the screen basket (2) in the first longitudinal direction and, after being filtered, filtered liquid flows away from the screen basket (2) in the first longitudinal direction while debris-laden liquid flows in a second longitudinal direction being opposite the first longitudinal direction ~~and,~~

wherein the conically-shaped screen basket (2) tapers in the first longitudinal direction and

wherein the debris extractor arm (3) includes a pair of pentagon-shaped panel members, a first side connecting member, a second side connecting member, an intermediate side connecting member and an elongated trumpet-shaped inlet nozzle,

the pair of pentagon-shaped panel members being disposed apart from one another in a facially-opposing mirrored relationship, each pentagon-shaped panel member having a long edge, a first intermediate edge, a second intermediate edge, a

first short edge and a second short edge with the long edge being longer than the first intermediate edge, the second intermediate edge, the first short edge and the second short edge and the first and second intermediate edges being longer than the first short edge and the second short edge and with the long edge being contiguous to and between the first and second short edges, the first intermediate edge being contiguous to and between the first short edge and the second intermediate edge and the second intermediate edge being contiguous to and between the first intermediate edge and the second short edge,

the first side connecting member connected to and between respective ones of the first short edges, the second side connecting member connected to and between respective ones of the second short edges and the intermediate side connecting member connected to and between respective ones of the second intermediate edges thereby defining a debris extraction channel with opposing ones of the long edges and the first and second side connecting members defining a debris inlet into the debris extraction channel and with opposing ones of the first intermediate edges, the first side connecting member and the intermediate side connecting member defining a debris outlet from the debris extraction channel for fluid communication with the debris discharge pipe,

the elongated trumpet-shaped inlet nozzle connected to the respective ones of the long edges, the first side connecting member and the second connecting member, the elongated trumpet-shaped inlet nozzle having a curvature towards the screen and extending outwards at a predetermined radius with a respective vertical plane to create a low pressure between the debris extractor arm (3) and the screen basket (2) for complete extraction of debris and conveying to said debris discharge pipe (1).

8. - 11. (Canceled)